

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

No. 4/576

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Inverted Compound Surface Condensing.*
 Made by *Messrs Blair & Co.*
 When *March 1876* At *Stockton.*
 Diameter of cylinders *27" x 50"* Length of stroke *33.*
 No. of revolutions per minute *about 65.*
 Point of cut off *1/2 stroke.*
 Diameter of screw shaft *8 3/4.*
 Diameter of crank shaft journals *9.*
 Diameter of screw, or of paddle wheel *12.6*
 Pitch of screw *14.0.*
 No. of blades, *4* Total surface *30 sq. ft.*
 No. of bilge pumps *2* and sizes *3 1/2 x 2 1/4 stroke single acting*
 Do they pump from each compartment *from engine room & aft. well.*

Are all the bilge suction pipes fitted with roses *yes,*
 No. of feed pumps *2* and sizes *3 1/2 x 2 1/4 single acting.*
 What gauges are there attached to the engines and boilers ... *1 vacuum gauge on Condenser, 1 steam on boiler in engine room & 1 in stokehole*
 Description and size of Donkey Pumps ... *one double acting inverted 7 1/2 dia. x 9" stroke.*
 Where do they pump from ... *from Tanks, sea, & bilges.*
 No. of bilge injections *one* and sizes *3 1/2 dia.*
 Are they connected to air, or circulating pumps *to circulating pump.*
 Is there a hand pump in the engine room *no (donkey can be used)*
 Can it be worked by the main engines *no.*
 Is there a deck hose of sufficient length to reach to any part of the vessel *yes.*

MAIN BOILERS.

Number *one* Description *Cylindrical & Multitubular.*
 Made by *Messrs Blair & Co.*
 When *March 1876* At *Stockton.*
 Working pressure *70 lbs per sq. inch.*
 Tested by hydraulic pressure to *140 lbs*, Date *July 1876.*
 Description of super-heating apparatus *none.*
 Can each boiler be worked separately *only 1 boiler.*

Can the super-heater be shut off and the boilers worked separately }
 Description and area of safety valves on each boiler ... *2 spring safety valves, 4 dia. = 25 sq. ins area.*
 No. of square feet of fire-grate surface in each boiler *43 1/2.*
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *yes.*
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *yes.*

DONKEY BOILER.

Description *Upright, round, with 2 water tubes.*
 Where fixed *in stokehole.*
 Working pressure *43 lbs per sq. inch.*

Tested by hydraulic pressure to *130 lbs per sq. inch.* Date *July 1876*
 Description and area of safety valves *one loaded direct 2 1/4 x 1 bore & weight 2 1/4 = 7.8*
 No. of square feet of fire grate *9.6.*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *yes.*
 Are they Kingston valves or common cocks ... *Common Stop valves & Cocks.*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *yes.*
 Are the discharge pipes above or below the deep water line *Above.*
 Are they each fitted with a discharge valve on the plating of the vessel *yes.*

What pipes are carried through the bunkers *none.*
 How are they protected ...
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *new.*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *yes, by non return valves.*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *No Tunnel. Sluice door on bulkhead*

Geo Blair & Co. Ltd Manufacturer. *except of the donkey boiler.*
S. M. Blair

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel "*Erasmus Wilson*" owned by *London Steamship Co. Ltd* of the Port of *London* of *496 60* Tons Register, and *100* Registered Horse Power, and that they have been carefully inspected and examined by me at *Hartlepool.* and found to be at this date, viz., *April 11th 1876* in good order and safe working condition.

Survey fee *£5-0-0*
 Certificate *£5-5-0*

Received at *Hartlepool*
 by *S. M. Blair*

William Allison.
 Engineer Surveyor to Lloyd's Register of Shipping.